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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,399	07/03/2007	Christine Kienhofer	1549.009	3737

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EXAMINER

TOLAN, EDWARD THOMAS

ART UNIT

PAPER NUMBER

3725

NOTIFICATION DATE

DELIVERY MODE

06/23/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/581,399

Applicant(s)

KIENHOFFER ET AL.

Examiner

EDWARD TOLAN

Art Unit

3725

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of "cardan shaft for a motor vehicle" does not further limit claim 1 and there is not antecedent basis for the limitation in claim 1. No motor vehicle or connection means for connecting a particular type of drive shaft comprising a cardan shaft is set forth in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Claims 1-3,6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Palovcik (4,298,155). Palovcik discloses a method of forming a tubular drive shaft product (40) comprising a first section (58) with a first diameter (D3) equal to a starting workpiece (70) diameter and a second section (44) with a second diameter (D1) smaller than the first diameter and a transition section (48) in which a diameter diminishes from the first diameter to the second diameter. The transition section (48) is provided with an annular bead (52) that coaxially surrounds a longitudinal axis of the tubular product. The tube blank (70) is reshaped by cold swaging (col. 6, lines 8-15). The annular bead is secured by welding (66) to an outer surface of the transition section (48).

Claims 1-7,9-14 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Takehara et al. (6,038,771). Takehara discloses a method of forming a tubular drive shaft product (figs. 1E,1F) comprising a first section (22) with a first diameter equal to a starting workpiece (21) diameter (col. 4, lines 36-38) and a second section (25) with a second diameter smaller than the first diameter and a transition section (24) in which a diameter diminishes from the first diameter to the second diameter. The transition section (24) is provided with an annular bead (32, fig. 2B) that coaxially surrounds a longitudinal axis of the tubular product. The tube blank (21) is reshaped by cold forging (col. 4, line 36). As seen in fig. 2B, annular bead (32,32A) is formed at an outer and an inner side of the transition section (24), extending along a whole circumference of the transition section without interruption. Takehara also discloses beading (fig. 2C,5A,5B) to form various grooved (fig. 5A) and embossed (fig. 5B) features that are continuous (fig. 7A,7B) or interrupted patterns (fig. 7C,7D). Takehara discloses bead rolling or swaging (col. 5, lines 38-41) and pressing (fig. 6C,6D) to form corrugations (35-1,35-2). The pressing depth is about 0.3mm (col. 7, lines 47-48).

Regarding claim 14, fig. 2b shows a parallel force in that die (300) is slanted in order to form the bead (32) and a longitudinal section of the tubing adjacent thereof. Regarding claim 17, Takehara discloses a counter bearing (20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takehara in view of (Clark 3,564,896). Takehara does not disclose cutting (chip removing) processing of the transition section. Clark teaches cold or hot swaging of a drive shaft and teaches that a largest (32) and smallest diameter (37) are separated by a gradually tapering transition section (34,35,36). Beaded areas comprising stepped faces (49,61) are ground in a chip removing operation (col. 5, lines 49-55) to form them to specified tolerances. It would have been obvious to one skilled in the art at the time of invention to form the beaded areas of Takehara by cutting as taught by Clark in order to form the beads to a close tolerance.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takehara in view of Troughton et al. (4,921,116). It appears that Applicant is claiming a stretching or stretch drawing operation. Takehara does not disclose a purely parallel forming force component. Troughton teaches a stretching process to form a tubular blank into a product having tapered areas (26) and spaced beads (18,19) It would have been obvious to one skilled in the art at the time of invention to stretch draw areas of the tube of Takehara as taught by Troughton in order to stretch and expand a tube area to form outwardly projecting beads and tapered sections adjacent to the beads.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWARD TOLAN whose telephone number is (571)272-4525. The examiner can normally be reached on M-F.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward Tolan/
Primary Examiner, Art Unit 3725